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26799	7590	11/03/2005	EXAMINER	
IP LEGAL DEPARTMENT TYCO FIRE & SECURITY SERVICES ONE TOWN CENTER ROAD BOCA RATON, FL 33486			HUNNINGS, TRAVIS R	
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			2632	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/698,910

Applicant(s)

CLUCAS, ROBERT A.

Examiner

Travis R. Hunnings

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 14-16, 18, 20, 22, 23 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carney et al. (Carney; US Patent 5,446,447).

Regarding claim 1, Carney discloses *RF Tagging System Including RF Tags With Variable Frequency Resonant Circuits* that has the following claimed subject matters:

The claimed method comprising establishing an interrogating zone using at least two signals operating at different frequencies is met by the system continuously sweeping through all of the frequencies which the resonant circuits of the RF tags may be resonant (column 9, lines 3-6);

The claimed method comprising monitoring said interrogation zone to detect a plurality of security tags with a first type of security tag responsive to at least a first signal at a first frequency and a second type of security tag responsive to at least a second signal at a second frequency is met by the detector detecting the selected

resonant frequencies of the multiple RF tags that are responsive to any one of a plurality of resonant frequencies (column 9, lines 3-41 and column 10, lines 4-14). The tags that are responsive to a different frequency from one another would be considered to be tags of a different type;

The claimed method comprising determining whether to generate an alarm if a security tag is detected by receiving a third signal comprising a combination of said first and second signals from a first security tag of said first type and filtering said third signal to remove frequency components of said first signal is met by the RF tag resonating at selected ones of the different frequencies in a predetermined time sequence corresponding to a predetermined identification code in response to the interrogation signal (column 9, lines 3-41 and column 10, lines 4-14) and the reader having decoding means that includes tuneable band pass filters tuning the reader to detect each of the particular resonant frequencies of the tags (column 9, lines 34-41);

The claimed generating said alarm in accordance with said determination would have been obvious to one of ordinary skill in the art when an RF tag was detected because the use of RF tagging in security systems that implement anti-theft alarms are well known in the art (column 1, lines 23-31).

Regarding claim 2, the claimed method comprising transmitting said first signal at said first frequency and transmitting said second signal at said second frequency is met by the system continuously sweeping through all of the frequencies which the resonant circuits of the RF tags may be resonant (column 9, lines 3-6).

Regarding claim 3, it would have been obvious to one of ordinary skill in the art to use the claimed frequencies as transmitting frequencies because they are possible frequencies that are known for RF tags to be resonant.

Regarding claim 4, the claimed method comprises receiving said third signal at a third frequency from said first security tag in response to said first and second signals is met by the RF tag resonating at selected ones of the different frequencies in a predetermined time sequence corresponding to a predetermined identification code in response to the interrogation signal (column 9, lines 3-41 and column 10, lines 4-14).

Regarding claim 5, the claimed method comprising determining whether said second signal remains after said filtering and sending an alarm signal if said second signal remains after said filtering is met by the reader having decoding means that includes tuneable band pass filters tuning the reader to detect each of the particular resonant frequencies of the tags (column 9, lines 34-41). The claimed sending an alarm signal if said second signal remains after said filtering would have been obvious to one of ordinary skill in the art when an RF tag was detected because the use of RF tagging in security systems that implement anti-theft alarms are well known in the art (column 1, lines 23-31).

Regarding claim 6, the claimed method comprising receiving said alarm signal and triggering said alarm in response to said alarm signal would have been obvious to one of ordinary skill in the art when an RF tag was detected because the use of RF tagging in security systems that implement anti-theft alarms are well known in the art (column 1, lines 23-31).

Regarding claim 14, the claimed at least one antenna is met by the antenna (column 8, lines 65-67);

The claimed transceiver to connect to said antenna and establish an interrogation zone is met by the RF energy transmitter and reader that detect RF tags present in the transmission zone (column 8, lines 65-67 and column 9, lines 3-41);

The claimed first and second security tags of a first and second type that communicate with said transceiver, said first and second security tags being responsive to at least a first and second signal at a first and second frequency respectively is met by the reader being able to detect several different types of tags that are resonant at different frequencies (column 9, lines 3-41);

The claimed reader system to connect to said transceiver and to determine whether either security tag is within said interrogation zone by receiving a third signal comprising a combination of said first and second signals from said first security tag and filtering said third signal to remove frequency components of said first signal is met by the RF tag resonating at selected ones of the different frequencies in a predetermined time sequence corresponding to a predetermined identification code in response to the

interrogation signal (column 9, lines 3-41 and column 10, lines 4-14) and the reader having decoding means that includes tuneable band pass filters tuning the reader to detect each of the particular resonant frequencies of the tags (column 9, lines 34-41).

Regarding claim 15, the claimed reader system being configured to send an alarm signal if either security tag is within said interrogation zone would have been obvious to one of ordinary skill in the art when the system is used in an anti-theft environment (column 1, lines 23-31).

Regarding claim 16, the claimed security system further comprising an alarm system to connect to said reader system, said alarm system to receive said alarm signal and provide an alarm in response to said alarm signal would have been obvious to one of ordinary skill in the art when the system is used in an anti-theft environment (column 1, lines 23-31).

Regarding claim 18, the claimed first security tag being a radio frequency tag is met by the RF tags (column 9, lines 3-41).

Regarding claim 20, the claimed security system comprising at least one antenna is met by the reader including an antenna (column 8, lines 65);

The claimed security system comprising a transceiver to connect to said antenna and establish an interrogation zone using at least a first signal at a first frequency and a

second signal at a second frequency is met by the device of Carney transmitting a plurality of signals at different frequencies (column 9, lines 3-6) and detecting the signals resonated by the RF tags at the reader (column 8, lines 65-67, column 9, lines 3-41);

The claimed security system comprising a reader system to connect to said transceiver and configured to detect different security tags within said interrogation zone by receiving a third signal comprising a combination of said first and second signals and filtering said third signal to remove frequency components of said first signal is met by the RF tag resonating at selected ones of the different frequencies in a predetermined time sequence corresponding to a predetermined identification code in response to the interrogation signal (column 9, lines 3-41 and column 10, lines 4-14) and the reader having decoding means that includes tuneable band pass filters tuning the reader to detect each of the particular resonant frequencies of the tags (column 9, lines 34-41).

Regarding claim 22, the claimed security system comprising a filter to filter out said first signal from said third signal is met by the tuneable band pass filters (column 8, lines 65-67).

The claimed security system comprising a detector to determine if said second signal is present in said filtered signal is met by the tuneable band pass filters and the decoding means that determine which frequency of the RF tag is resonating at a particular time (column 10, lines 4-14).



The claimed security system comprising a decoder module to decode a unique identifier from a fourth signal received in response to said second signal is met by the decoding means detecting the particular RF frequency that the tag is resonating at (column 10, lines 4-14).

It would have been obvious to include an event module to generate an event signal (such as an alarm signal) in response to a signal from said detector or said decoder module when an RF tag is detected in order to operate an alarm system that is well known in the art of RF tags (column 1, lines 23-31).

Regarding claim 23, the claim is interpreted and rejected as claim 16 stated above.

Regarding claim 26, the claim is interpreted and rejected as claim 1 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

Regarding claim 27, the claim is interpreted and rejected as claim 2 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

Regarding claim 28, the claim is interpreted and rejected as claim 4 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

Regarding claim 29, the claim is interpreted and rejected as claim 5 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

Regarding claim 30, the claim is interpreted and rejected as claim 6 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

3. Claims 7, 10, 12, 17, 19, 21, 24, 25 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carney in view of Vega (US Patent 6,362,738).

Regarding claim 7, Carney discloses all of the claimed limitations except for the claimed method comprises receiving a fourth signal from a second security tag of said second type in response to said second signal, said fourth signal representing security tag information stored by said second security tag. Vega discloses *Reader For Use In*

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*Radio Frequency Identification System And Method Thereof* that teaches a combined EAS and RFID tag reader that can detect the presence of both regular EAS (RF) and RFID tags (column 4, lines 51-55). The system of Vega interrogates the RFID tag and receives a response signal that contains information that is stored in the RFID tag (column 4, lines 51-55). Modifying the system of Carney to be able to detect both regular RF and also RFID security tags, and receive a signal from the RFID tag that includes information stored in the RFID tag, would increase the benefits of the system by being able to detect multiple types of tags. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to receive a fourth signal from a second security tag in response to said second signal, said fourth signal representing security tag information stored by said second security tag.

Regarding claim 10, the claimed method comprising receiving a first and second signal having a first and second frequency respectively at a first security tag of a first type is met by the system continuously sweeping through all of the frequencies which the resonant circuits of the RF tags may be resonant (column 9, lines 3-6);

The claimed receiving said second signal at a second security tag of a second type is met by the system continuously sweeping through all of the frequencies which the resonant circuits of the RF tags may be resonant (column 9, lines 3-6);

The claimed transmitting a third signal comprising a combination of said first and second signals from said first security tag to a reader system in response to said first

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and second signals, said reader system configured to filter said third signal to remove frequency components of said first signal is met by the RF tag resonating at selected ones of the different frequencies in a predetermined time sequence corresponding to a predetermined identification code in response to the interrogation signal (column 9, lines 3-41 and column 10, lines 4-14) and the reader having decoding means that includes tuneable band pass filters tuning the reader to detect each of the particular resonant frequencies of the tags (column 9, lines 34-41);

Carney does not specifically disclose the claimed method comprises receiving a fourth signal from a second security tag of said second type in response to said second signal, said fourth signal representing security tag information stored by said second security tag. Vega teaches a combined EAS and RFID tag reader that can detect the presence of both regular EAS (RF) and RFID tags (column 4, lines 51-55). The system of Vega interrogates the RFID tag and receives a response signal that contains information that is stored in the RFID tag (column 4, lines 51-55). Modifying the system of Carney to be able to detect both regular RF and also RFID security tags, and receive a signal from the RFID tag that includes information stored in the RFID tag, would increase the benefits of the system by being able to detect multiple types of tags. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to receive a fourth signal from a second security tag in response to said second signal, said fourth signal representing security tag information stored by said second security tag.

Regarding claim 12, the claim is interpreted and rejected as claim 3 stated above.

Regarding claim 17, Carney discloses all of the claimed limitations except for the claimed security system wherein said second security tag is a radio frequency identification (RFID) tag, said RFID tag further comprising an identification module to provide an identifier for said second security tag and a transmitter to send a signal with said identifier to said transceiver. Vega teaches a combined EAS and RFID tag reader that can detect the presence of both regular EAS (RF) and RFID tags (column 4, lines 51-55). The system of Vega interrogates the RFID tag and receives a response signal that contains information that is stored in the RFID tag (column 4, lines 51-55) including the tag's identification (column 3, lines 42-44). Modifying the system of Carney to be able to detect RFID tags in addition to RF tags would be beneficial because the system would then be able to detect multiple different types of tags. It is obvious that an RFID tag includes an identification module to provide an identifier for said security tag and a transmitter to send a signal with said identifier to said transceiver. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to have the second security tag be a radio frequency identification (RFID) tag, said RFID tag further comprising an identification module to provide an identifier for said second security tag and a transmitter to send a signal with said identifier to said transceiver.

Regarding claim 19, Carney discloses all of the claimed limitations except for the claimed security system further comprises a deactivation module to deactivate said first and second security tags. Vega teaches a deactivation system that is in place to deactivate the disposable transponders (both EAS (RF) and RFID) before they are taken through the interrogation zone (column 4, lines 46-55). Adding a deactivation system to Carney would allow the users to walk out of the security system with a valid purchase without setting off the alarm and it would cut down on false alarms caused in this manner. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to add a deactivation module to deactivate said first and second security tags.

Regarding claim 21, the claimed security system wherein one of said security tags is a radio frequency security tag is met by the tag being receptive to RF signals (column 9, lines 3-41);

However, Carney does not specifically disclose the claimed security system wherein one of said security tags is a radio frequency identification (RFID) security tag. Vega teaches a combined EAS and RFID tag reader that can detect the presence of both regular EAS (RF) and RFID tags (column 4, lines 51-55). The system of Vega interrogates the RFID tag and receives a response signal that contains information that is stored in the RFID tag (column 4, lines 51-55) including the tag's identification

(column 3, lines 42-44). Modifying the system of Carney to be able to detect RFID tags in addition to RF tags would be beneficial because the system would then be able to detect multiple different types of tags. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to allow the system to detect both RF and RFID tags.

Regarding claim 24, Carney discloses all of the claimed limitations except for the claimed security system comprising an inventory control system to receive said event signal and store information associated with said unique identifier. Vega discloses *Reader For Use In A Radio Frequency Identification System And Method Thereof* that teaches an RF tag reader system that is connected to a host computer that has a database that can store event information regarding the RF tags (col4 63-65 and col3 55-59). Including a host computer with a updateable database to track inventory changes for the RF tags would increase the flexibility of the system and allow a better tracking of tagged items that are used in security systems. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to include a control system to receive said event signal and store information associated with said unique identifier.

Regarding claim 25, Carney discloses all of the claimed limitations except for the claimed security system further comprising a deactivation module to deactivate either said first or second security tags. Vega teaches a deactivating module for deactivating the security tags after purchase so the security system is not set off (col4 46-48). Adding a deactivation module to the device of Carney would help to prevent false alarms if an RF tag was inadvertently left on a validly purchased item. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney according to the teachings of Vega to include a deactivation module to deactivate either said first or second security tags.

Regarding claim 31, the claim is interpreted and rejected as claim 7 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

4. Claims 8, 9, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carney in view of Vega and further in view of Shanahan (US Patent Publication 2004/0148226).

Regarding claim 8, Carney and Vega disclose all of the claimed limitations except for the claimed method wherein said determining comprises decoding said security tag information from said fourth signal, said security tag information comprising



an identifier for said second security tag, comparing said identifier to a list of valid identifiers, determining whether said identifier is valid based on said comparison, and sending an alarm signal if said identifier is not valid. Shanahan discloses *Method And Apparatus For Electronic Product Information And Business Transactions* that teaches a security system having an RFID reader that when an RFID tag is detected, the system draws out the RFID tag identifier and compares it to a list of valid items that can pass through the security system and if the identifier does not match then an alarm is sounded (paragraph 51). It would be beneficial to modify the method of Carney and Vega in this manner because it would help to prevent the theft of items along with providing a valuable stock-keeping operation. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney and Vega according to the teachings of Shanahan to modify the method wherein said determining comprises decoding said security tag information from said fourth signal, said security tag information comprising an identifier for said second security tag, comparing said identifier to a list of valid identifiers, determining whether said identifier is valid based on said comparison, and sending an alarm signal if said identifier is not valid.

Regarding claim 9, Carney, Vega and Shanahan disclose all of the claimed limitations. The claimed method comprising receiving said alarm signal and triggering said alarm in response to said alarm signal is met by the alarm being triggered when the identifier is not valid (paragraph 51).

Regarding claim 32, the claim is interpreted and rejected as claim 8 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

Regarding claim 33, the claim is interpreted and rejected as claim 9 stated above. The examiner takes official notice that it is well known in the art to use computers and computer related technology (i.e. CPU, memory, etc...) to implement electronic systems.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carney in view of Vega and further in view of Landt et al. (Landt; US Patent 5,030,807).

Regarding claim 11, Carney and Vega disclose all of the claimed limitations except for the claimed method further comprising receiving a fifth signal in response to said fourth signal, said fifth signal representing said identifier for said second security tag and a second code; storing said second code at said security tag; receiving said second signal at said second security tag; and transmitting a sixth signal from said second security tag in response to said second signal, with said sixth signal representing said identifier for said second security tag and said second code. Landt discloses *System For Reading And Writing Data From And Into Remote Tags* that

teaches receiving a signal from a tag including the tag's identifier and recognizing that the tag needs to be written to then sends a signal to the tag to write the new information into the tag (figure 1). It would be obvious that after such a write to the tag, any further interrogation of the tag that would normally receive the first code would now receive the second code as the second code has now been written into the tag, so any interrogation of the tag by the 'second signal' would result in a separate signal response from the tag including the identifier of the tag and the new code stored in the tag. It would be beneficial to modify the device of Carney and Vega to be able to write to the RFID tags in the system in order to modify the contents of the information stored in the tags in order to better serve any number of functions including stock-keeping, price-changing, etc... Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Carney and Vega according to the teachings of Landt to modify the method to further comprise comprising receiving a fifth signal in response to said fourth signal, said fifth signal representing said identifier for said second security tag and a second code; storing said second code at said security tag; receiving said second signal at said second security tag; and transmitting a sixth signal from said second security tag in response to said second signal, with said sixth signal representing said identifier for said second security tag and said second code.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-12 and 14-33 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRH

  
Thomas J. Mullen, Jr.  
Primary Examiner  
Art Unit 2632 10-31-05